fessor of physics at Columbia University, who offered at once to introduce him to Liebig, and assist in every way toward the desired end. But Rood advised him not to use his letters of introduction; not to call Liebig 'professor,' but 'Herr Baron'; to have plenty of assurance, and not to spare flattery. With this preparation the introduction was brought about and Brewer stated his mission. Liebig assured him that he would do better to go somewhere else. He said: 'I will give you no attention; no attention.' This assurance met every advance until finally the speaker said: 'I told him I have come three thousand miles to sit at the feet of the greatest teacher of chemistry in Europe and I am going to remain here.' 'Well,' said Liebig, 'see Mr. Meyer.'

He saw 'Mr. Meyer,' and a place was set apart in the laboratory for the new student, who remained there a year, but actually received practically 'no attention,' except when he showed some organic crystals to him which had the appearance of potassium nitrate, and were so pronounced by Liebig on sight. The effort to convince him that they were organic was followed by a sound berating for 'contradicting,' which was later followed by demonstrating to the great professor that no contradiction had been intended, and that the crystals were in fact 'very peculiar.' Professor Brewer's address was full of personal interest and was followed with the closest attention.

Dr. Carl Duisberg read a paper describing the influence of Liebig on chemical industry, his teachings resulting in that knowledge of the importance of scientific method which has so largely displaced the 'rule-of-thumb' man by trained chemists in all the great chemical industries of Germany; and more or less in other countries. Liebig's influence was exerted chiefly on the organic chemical industries, and much of their progress is due to his activity and energy while at Giessen.

"A staff of his pupils making their way to all quarters of the globe disseminated his ideas in assisting agriculture and the chemical industries, and as the first systematic teacher of laboratory methods, the credit is justly due him for an influence which can hardly be measured or described."

Among those assembled to honor the memory of the great chemist were Mr. Ivan Levenstein, of Manchester, England, president of the Society of Chemical Industry, and his son, who represents the Levenstein Company, limited, in this country; Dr. Liebmann, also of Manchester; Drs. H. Reisenegger and F. Backe, of the color works at Höchst am Rhein; Dr. Teichmann, of Kuhnheim Works, Berlin; F. Bayer of Elberfeld; W. Haarmann and son of Holzminden, German; also Dr. T. J. Parker, chairman of the American Chemical Society; Dr. McMurtrie, ex-president of the same society; Professors W. H. Hallock and C. E. Pellew, of Columbia University; Charles A. Doremus, William Jay Schieffelin and others.

Durand Woodman.

*THE DALTON CELEBRATIONS AT MANCHESTER.**

The Manchester celebrations in connection with the centenary of Dalton's atomic theory began on Tuesday afternoon, May 19, when Professor F. W. Clarke, chairman of the International Commission on Atomic Weights, delivered the Wilde lecture on the 'Atomic Theory' to the Manchester Literary and Philosophic Society. Addresses were presented on behalf of the Royal Society and the Chemical Society, and a message was received from the Russian Physico-chemical Society. In an admirable discourse Professor Clarke sketched the history of the atomic theory from its first conception in the minds of Greek philosophers down to the present day. He pointed out the directions in which the atomic theory would probably develop, but declared that the problem of matter would never be solved until the atomic weights of the elements had been finally settled. "Who," he asked, "will establish the Dalton Laboratory for pure research, and so give the work which he started a permanent home?"

In the evening the Literary and Philosophical Society gave a dinner, at which the prin-

* From *Nature*.

cipal guests were Professors Clarke and van't Hoff, Professor A. E. Armstrong, Mr. Brereton Baker, Professor P. F. Frankland, Mr. Vernon Harcourt, Dr. Harden, Sir James Hoy, Professor Kipping, Dr. W. H. Perkin, Sr., Sir William Ramsay, Professor Emerson Reynolds, Sir Henry Roscoe, Professor Smithells, Dr. Scott, Professor Thorpe and Professor Tilden.

In proposing the toast of the evening, the 'Wilde' medallist—Professor Clarke—and the Dalton medallist—Professor Osborne Reynolds—Sir Henry Roscoe said that Dalton's atomic theory and Joule's discovery of the mechanical equivalent of heat reflected more distinction on Manchester than the city's association with the cotton industry or with the Ship Canal.

On Wednesday morning a special meeting of the Owens College Chemical Society was held to offer an address to the great Dutch chemist, J. H. van't Hoff, now professor at the Berlin University. Professor Dixon was in the chair. The address was presented by Mr. Norman Smith, a former student under Professor van't Hoff. The professor, who was enthusiastically received, said the question was often asked, nowadays, whether the atomic theory had not outlived its utility. His reply was that, in dealing with natural phenomena, with states of unstable equilibrium, the atomic theory was indispensable for essential explanations. He had come to regard the conception of the carbon atom as the center of a tetrahedron as childish, but it contained the germ of a profound truth, the solution of which must be left to the future. He suggested that valency was due to an equilibrium. The four mutually repellent 'electric atoms' of Helmholtz were kept in equilibrium by their attraction for the carbon atom at the center.

Later in the morning Earl Spencer, Chancellor of the Victoria University, conferred the honorary degree of Doctor of Science on Professor Clarke and Professor van't Hoff, who were presented by Professor Dixon. After the conclusion of the ceremony Professor van't Hoff laid the first stone of the proposed extension of the Owens College Chemical Laboratories, and was presented, as a memento of the occasion, with a silver trowel by the College Chemical Society. The celebrations were concluded by a soirée held at the Owens College on Thursday night, when Dr. Harden gave an interesting account of John Dalton, and many Dalton relics were exhibited by the Manchester Literary and Philosophical Society, Professor H. B. Dixon, Mr. Theodore Neild, Mr. G. W. Graham and Mr. G. S. Woolley.

TRIGONOMETRIC SURVEY OF BRAZIL.

THE Brazilian government has provided for the mapping of its territory on a scientific basis. Last year the congress appropriated the necessary funds for commencing the work, and a commission of which Colonel Francisco de Abreu Lima is President, was to leave Rio early in May for the state of Rio Grande do Sul to make a reconnaissance of the first zone to be triangulated.

The scheme as far as at present outlined, includes the measurement of bases at Porto Alegre and Uruguayana, and the connection of these two cities by triangulation. This will give an arc of about six and one quarter degrees of longitude in about latitude 30° south.

The Superintendent of the U. S. Coast and Geodetic Survey has been requested by the commission to supervise the preparation of the necessary tapes and accessories for the measurement of the bases.

SCIENTIFIC NOTES AND NEWS.

DR. W J MCGEE has been appointed chairman of the committee of the International Geographical Congress of 1904, succeeding General A. W. Greely, who has resigned owing to ill health and the pressure of official duties.

THE University of Marburg has conferred its honorary doctorate on Mr. Geo. F. Kunz, of New York City.

M. HENRI BECQUEREL, Paris, and Professor A. Righi, Bologna, have been elected honorary fellows of the Physical Society of London.

DR. MAX NOETHER, professor of mathematics at Erlangen, has been elected a foreign member of the Academy of Sciences at Buda Pesth.